REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested. Claims 1 – 26 are pending in the application.

Claim Rejections – 35 USC § 103

Claims 1-12, 17-21, and 24-26 were rejected under 35 USC 103(a) as being unpatentable over Shandony (US patent no. 6,675,261).

Favorable reconsideration of this rejection in view of the above amendments and the following explanations is respectfully requested.

Shandony (US patent no. 6,675,261), as described in the background of the invention section, deals with the problem of slowed processing due to repeated accessing of the same data store entries, by teaching request base caching on a server. Shandony describes an example wherein this request base catching is implemented in an identity system, as described in column 1, line 46: "For example, a request may cause the identity system to load data into a data store entry and later retrieve the newly loaded data multiple times for performing different functions". Shandony describes an exemplary identity system implementation of his teachings. This identity system provides entities to create, delete, and manage groups of users who need identical access privileges to specific resource or set of resources (Column 7, line 63).

The present invention, as described in the field of invention section, relates to a method and apparatus for automatic elicitation and specification of role grouping by shared resource utilization and more particularly but not exclusively to grouping of users into roles according to their access rights to shared resources, typically but again not exclusively over a network. The apparatus for role grouping disclosed by the present invention, utilizes *pattern recognition*, applied to existing information relating to a user population and its access levels and utilization levels of resources, so as to automatically discover relationship patterns amongst nodes, as required by claim 1, which is discussed in greater detail below.

Shandony does not teach the automated induction of common access patterns for users, and he does not teach the automated construction of the user groups based on such common access patterns. Instead, Shandony relies on a pre-defined group membership structure. Shandony also never suggests or even hints at the use of such a *pattern recognition* utilizing apparatus. In fact, as described above, Shandony only teaches an apparatus for avoiding repetitive retrieval of data entries from a data store, and illustrates his apparatus implementation using an identity system example, wherein users and resources relationships can be presented and maintained by delegated administrators (column 7, lines 30-50).

Claim 1 defines a pattern recognition apparatus for grouping nodes according to relationships with other nodes, the apparatus comprising: an input for receiving an arrangement of nodes, the arrangement comprising at least two partitions of the nodes and with predetermined relationships between nodes across the partitions, and a pattern recognition unit associated with the input, for *automatically* finding relationship patterns amongst the nodes *using pattern recognition* on the nodes and the relationships, thereby to form at least one group from nodes of a first of the partitions, wherein the nodes being formed into the group share relationships with same ones of a predetermined number of nodes in a second partition.

As described above, Shandony never suggests or even hints at such a *pattern recognition* utilizing apparatus, for *automatically* finding relationship patterns amongst nodes using pattern recognition, as defined by claim 1. Rather Shandony discloses an Identity System having a Group Manager, which provides for self-registration of users to groups, and which lets companies form dynamic groups specified by a LDAP filter, which is used to filter users according to their computer system directory stored attributes. With Shandony, it is possible to create groups by manually associating users and resources, or implicitly by assigning existing rules to users. However, in large organizations this is usually a very difficult and non-trivial task. The present application provides organizations with an apparatus and method to analyze the existing privileges structure in order to automatically determine the grouping that best reflects their business practices. Thus, the apparatus and method described in the present application can be used to

automate formation of the groupings that would later be provided to a system like the one taught by Shandony.

In other words, in the present invention as claimed in claim 1, the groups are implicitly present in the data but have not been explicitly defined. The apparatus of the present invention then uses pattern recognition in order to discover and explicitly define the underlying group structure. Shandonay does not "discover" such groups, but rather receives those group definitions as input.. Nor does Shandony use pattern recognition on the data to discover groups in any way, contrary to that which is claimed in the present independent claims.

Thus, it is respectfully believed that the currently amended claim 1 is novel and inventive in light of Shandonay.

Claim 25 defines a pattern recognition method for electronically grouping nodes according to relationships with other nodes, the method comprising: receiving an arrangement of nodes, the arrangement comprising at least two partitions of the nodes and with predetermined relationships between nodes across the partitions, and *automatically* finding relationship patterns amongst the nodes *using pattern recognition* on the nodes and the relationships, thereby to form at least one grouping of nodes of a first of the partitions, wherein the nodes being formed into the grouping share relationships with same ones of a predetermined number of nodes in a second partition.

As described above for claim 1, Shandony never suggests or even hints at the idea of *automatically* discovering existing relationship patterns amongst nodes using *pattern recognition,* as defined by the currently amended claim 25.
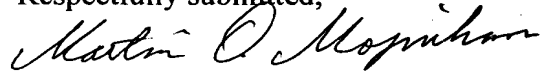
Claim 26 defines a reverse engineering tool for discovering structure in a partitioned nodal arrangement, the tool comprising: an input for receiving an arrangement of nodes, the arrangement comprising at least two partitions of the nodes and with predetermined relationships between nodes across the partitions, and a pattern recognition unit for *automatically* finding relationship patterns amongst the nodes *using pattern recognition* on the nodes and the relationships, thereby to form at least one group from nodes of a

first of the partitions, wherein the nodes being formed into the group share relationships with same ones of a predetermined number of nodes in a second partition.

Shandony never suggests or even hints at the idea of a reverse engineering tool for discovering structure in a partitioned nodal arrangement, the tool comprising a pattern recognition unit for *automatically* discovering relationship patterns amongst nodes, in the existing data, using *pattern recognition,* as defined by the currently amended claim 26.

The remaining claims mentioned in this section of the Office Action are believed to be allowable as being dependent on an allowable main claim. No new matter is added by the present amendments. All of the matters raised by the Examiner have been dealt with and are believed to have been overcome. In view of the foregoing, it is respectfully submitted that all the claims now pending in the application are allowable. An early Notice of Allowance is therefore respectfully requested.

Respectfully submitted,

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